

Marine Invertebrates



Other Crustaceans

Amphipoda

Cirripedia (Barnacles)

Isopods

Mysid shrimps

Tanaid shrimp

Decapods (Crabs, Shrimps)

Stomatopods (Snapping shrimp)

SPECIES STATUS:

IUCN Red List - Not considered

All Endemic except for *Carpilius*, *Cinetorhynchus hendersoni*, *Dromia*, and *Hymenocera*

SPECIES INFORMATION: The following are the Hawaiian and common names for these other crustaceans that have them: Hopper's hermit crab (*Aniculus hopperae*), poki poki (*Calappa pokipoki*), alakuma or 7-11 crab (*Carpilius maculates*), makua-o-ka-lipoa or sponge crab (*Dromia dormia*), kūmimi pua or Hawaiian pom pom crab (*Lybia edmondsoni*), Hawaiian hinge-beak shrimp (*Cinetorhynchus hawaiiensis*), Henderson's hinge-beak shrimp (*Cinetorhynchus hendersoni*), Hawaiian cave shrimp (*Gnathophyllum precipuum*), harlequin shrimp (*Hymenocera picta*), red pencil urchin shrimp (*Levicaris mammilata*), knotted liomera (*Liomera supernodosa*), bicolor sand shrimp (*Metanpenaeopsis sp.*), Rathbun's hinge-beaked shrimp (*Rhynchocinetes rathbunae*), and Earl's coral shrimp (*Stenopus earlei*). A complete list of Hawai'i other crustaceans of greatest conservation need that are not covered in other fact sheets is at the end of this fact sheet.

Amphipods primarily are detritivores or scavengers. However, some species in the family Gammaridae are filter-feeders, all species in the family Lysianassidae are flesh-scavenging, and all species in the family Stenocephalidae are parasitic. Many amphipods also catch small animals to augment their diet, although few are exclusively predacious. Barnacles exist in a hard shell which is attached to a substrate and from which they mostly filter feed. *Gorgonolaureus muzikae* is a barnacle parasitic on deep gorgonians. *Eriopisa* is blind.

Available information on individual decapod species includes the following material. The unauna, alakuma, hinge-beak shrimps, Hawaiian cave shrimp, and the bicolor sand shrimp are

nocturnal. Hermit crabs are scavengers, Earl's coral shrimp are cleaners, alakuma crush other crustaceans and snails, and kūmimi pua use anemones on their claws to capture prey and feed on invertebrates. Harlequin shrimp are predators of seastars, including crown-of-thorns starfish. It is also monogamous and pair-bonding. Specific feeding information for the other species is unknown, but they are likely scavengers.

Isopods primarily are scavengers and omnivores. Sexual reproduction occurs through copulation. Species of the family Cymothoidae are usually hermaphroditic. The two species here are ectoparasites. Stomatopods are carnivores, feeding on invertebrates with soft bodies, such as shrimp. They often wait at the entrance of their burrow for passing prey. Mysid shrimps can be benthic or swimming. They have more pairs of legs than classical shrimps. Tanaid shrimps are bottom-dwelling raptorial feeders.

Reproduction in the different groups is described in this paragraph. Fertilization is internal and development is direct in amphipods. Female clutch sizes range from two to 750 eggs and they usually produce more than one brood a year. All decapod species have separate sexes and reproduce through copulation. All females brood eggs under their tails, except for the bicolor sand shrimp that releases eggs directly into the ocean. Newly hatched larvae are part of the plankton community for weeks to months. Makua-o-ka-lipoa is the largest sponge crab in the world. Rathbun's hinge-beak shrimp is known as the mandarin shrimp in the aquarium trade. Stomatopods lay eggs at the bottom of burrows where females must keep a constant current flowing over them to keep them aerated. In other species females brood eggs. Larvae spend possibly as long as three months. Some tanaeids are hermaphroditic and all brood their young.

DISTRIBUTION: Earl's coral shrimp is found off O'ahu and Kaua'i. The other species with common names are found throughout the Hawaiian Islands. Knotted liomera is found throughout the Main Hawaiian Islands, but it is more common in the Northwestern Hawaiian Islands. *Plesionika* is found in the MHI. Little is known about the distribution of the species that lack common names as they are poorly surveyed and many are deep water residents.

ABUNDANCE: Unknown for all. Henderson's hinge-beak shrimp are found throughout the islands, but they are abundant off the coast of Kona, Hawai'i. Earl's coral shrimp is rare.

LOCATION AND CONDITION OF KEY HABITAT: Amphipod habitat varies by family. Gammarideans prefer bottom habitats, but most of these species also can swim. Species in the family Ampeliscidae and Corophiidae build tubes, species in the family Phoxocephalidae and Oedicerotidae are free-burrowing, species in the family Colomastigidae live commensally with sponges and ascidians, and species in the family Pleustidae are can be free-swimming or they may crawl, cling, or nestle. Many species burrow and live in the burrows, tunnels, or tubes they build. Others live in deep-sea habitats. Individual decapod species are described below. Many of the others are deep water species that are poorly known.

Information on individual decapod species is detailed in this paragraph. Many other species not described here are poorly known and/or live in deep waters. Hopper's hermit crab has primary habitat in caves and under ledges, but on exposed rocky shores from three feet to seventy feet (one to 21 meters). The kūmimi pua is found under stones in sand or on rubble in waters from approximately a meter to 30 meters (few feet to 100 feet) deep. The shrimp species inhabit a large range of areas. Hawaiian hinge-beak shrimp inhabit finger coral; Henderson's hinge-beak shrimp inhabit shallow, sheltered reefs; and Rathbun's hinge-beak shrimp prefer rocky substrates. Hawaiian cave shrimp are found only in caves. Red pencil urchin shrimp live commensally with the sea urchin *Heteroentrotus mammillatus*. The knotted liomera is found on reef and reef flats. Bicolor sand shrimp prefer sandy rubble while Earl's coral shrimp inhabit caves, crevices, and under ledges. Hinge-beak shrimp live on reefs. Cancer macrophthalmus has been found at over 270 meters (1000 feet) off Oahu. *Plesionika* is found deeper than 100 meters (330 feet).

Many isopods are benthic, but some can burrow or crawl. Stomatopods primarily inhabit shallow waters; however, they have been found at depths greater than 100 meters (328 feet) in Hawai'i. Adult stomatopods are bottom dwellers, living in burrows or in crevices of coral. Burrows are deep, and they may leave them to feed. Most stomatopods defend their burrows. Most tanaeids are bottom dwellers in littoral zones. They may live in holes or crevices in rocks, in the mud, or in tubes that they build. Some species live in deep waters.

THREATS:

- Aquarists collect alakuma, kūmimi pua, and makua-o-ka-lipoa, the hinge-beaked shrimps, harlequin shrimp, and maybe others.

CONSERVATION ACTIONS: In addition to common statewide and marine conservation actions, specific actions include:

- Maintain healthy populations with appropriate fishing regulations, enforcement, and education.

MONITORING:

- Survey for populations and distribution in known and likely habitats.

RESEARCH PRIORITIES:

- Improve understanding of factors affecting the species population sizes and distributions;
- Support aquaculture research to develop captive breeding for species used in the aquarium trade.

References:

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Kay AE. 1979. Hawaiian marine shells reef and shore fauna of Hawaii, section 4: Mollusca. Honolulu, HI: Bishop Museum Press. 653 pp.

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Other Crustacean SGCNs

Group	Family	Scientific Name	Hawaiian Name	Common Name
Amphipoda	Isaeidae	<i>Gammaropsis alamoana</i>	None	None
Amphipoda	Isaeidae	<i>Gammaropsis haleiwa</i>	None	None
Amphipoda	Isaeidae	<i>Gammaropsis kaumaka</i>	None	None
Amphipoda	Isaeidae	<i>Gammaropsis pali</i>	None	None
Amphipoda	Ampeliscidae	<i>Ampelisca hawaiiensis</i>	None	None
Amphipoda	Ampeliscidae	<i>Amphilocus kailua</i>	None	None
Amphipoda	Ampeliscidae	<i>Gitana liliuokalaniae</i>	None	None
Amphipoda	Ampeliscidae	<i>Gitanopsis pele</i>	None	None
Amphipoda	Ampeliscidae	<i>Mokuoloe ninole</i>	None	None
Amphipoda	Ampithoidae	<i>Ampithoe akuolaka</i>	None	None
Amphipoda	Ampithoidae	<i>Cymadusa hawaiensis</i>	None	None
Amphipoda	Ampithoidae	<i>Cymadusa oceanica</i>	None	None
Amphipoda	Aoridae	<i>Aloilo nene</i>	None	None
Amphipoda	Aoridae	<i>Aoroides nahili</i>	None	None
Amphipoda	Aoridae	<i>Bemlos intermedius</i>	None	None
Amphipoda	Aoridae	<i>Bemlos pualani</i>	None	None
Amphipoda	Aoridae	<i>Bemlos waipio</i>	None	None
Amphipoda	Aoridae	<i>Grandidierella mackena</i>	None	None
Amphipoda	Aoridae	<i>Konatopus pao</i>	None	None
Amphipoda	Colomastigidae	<i>Colomastix kapiolani</i>	None	None
Amphipoda	Corophiidae	<i>Atylus nani</i>	None	None
Amphipoda	Corophiidae	<i>Paradexamine maunaloa</i>	None	None
Amphipoda	Gammaridae	<i>Elasmopus calliactis</i>	None	None
Amphipoda	Gammaridae	<i>Elasmopus diplonyx</i>	None	None
Amphipoda	Gammaridae	<i>Eriopisa hamakua</i>	None	None
Amphipoda	Gammaridae	<i>Eriopisa laakona</i>	None	None

Group	Family	Scientific Name	Hawaiian Name	Common Name
Amphipoda	Gammaridae	<i>Eriopisella schellensis</i>	None	None
Amphipoda	Gammaridae	<i>Melita pahuwai</i>	None	None
Amphipoda	Ischyroceridae	<i>Ischyrocerus oahu</i>	None	None
Amphipoda	Ischyroceridae	<i>Leucothoe lihue</i>	None	None
Amphipoda	Ischyroceridae	<i>Ventojassa ventosa</i>	None	None
Amphipoda	Liljeborgiidae	<i>Liljeborgia heeia</i>	None	None
Amphipoda	Lysianassidae	<i>Lysianassa ewa</i>	None	None
Amphipoda	Ochelesidae	<i>Ochlesia alii</i>	None	None
Amphipoda	Oedicerotodae	<i>Kanaloa manoa</i>	None	None
Amphipoda	Phlantidae	<i>Palinnotus alaniphlias</i>	None	None
Amphipoda	Phoxocephalidae	<i>Mandibulophoxus hawaiiloa</i>	None	None
Amphipoda	Pleustidae	<i>Paraphoxus centralis</i>	None	None
Amphipoda	Pleustidae	<i>Parapleustes honomu</i>	None	None
Amphipoda	Podoceridae	<i>Laetmatophilus hala</i>	None	None
Amphipoda	Podoceridae	<i>Podocerus hanapepe</i>	None	None
Amphipoda	Anamixidae	<i>Anamixis moana</i>	None	None
Amphipoda	Podoceridae	<i>Podocerus talegus lawai</i>	None	None
Amphipoda	Sebidae	<i>Seba ekepuu</i>	None	None
Amphipoda	Stenothoidae	<i>Stenothoe haleloke</i>	None	None
Amphipoda	Talitroidae	<i>Hyale ayaeli</i>	None	None
Amphipoda	Talitroidae	<i>Hyale iole</i>	None	None
Amphipoda	Talitroidae	<i>Hyale waimea</i>	None	None
Cirripedia	Koleolepadidae	<i>Koleolepas tinkeri</i>	None	None
Cirripedia	Synagogidae	<i>Gorgonolaureus muzikae</i>	None	None
Cirripedia	Lithoglyptidae	<i>Lithoglyptes viatrix</i>	None	None
Cirripedia	Poecilasmatidae	<i>Octolasmis indubia</i>	None	None
Cirripedia	Lauridae	<i>Zoanthoecus cerebroides</i>	None	None
Decapoda	Albuneidae	<i>Albunea danai</i>	None	None
Decapoda	Alpheidae	<i>Alpheopsis biunguiculatus</i>	None	None
Decapoda	Alpheidae	<i>Alpheus brachymerus</i>	None	None
Decapoda	Alpheidae	<i>Alpheus pseudopugnax</i>	None	None
Decapoda	Alpheidae	<i>Leptalpheus pacificus</i>	None	None
Decapoda	Alpheidae	<i>Metalpheus hawaiiensis</i>	None	None
Decapoda	Alpheidae	<i>Salmoneus mauiensis</i>	None	None
Decapoda	Axiidae	<i>Prosthanocaris rufus</i>	None	None
Decapoda	Axiidae	<i>Axiopsis irregularis</i>	None	None
Decapoda	Axiidae	<i>Axius asper</i>	None	None
Decapoda	Axiidae	<i>Axius tridens</i>	None	None
Decapoda	Calappidae	<i>Calappa pokipoki</i>	pokipoki	None
Decapoda	Callianassidae	<i>Callianassa articulata</i>	None	None
Decapoda	Callianassidae	<i>Callianassa parva</i>	None	None
Decapoda	Callianassidae	<i>Glypturus lanceolata</i>	None	None
Decapoda	Callianassidae	<i>Glypturus winslowi</i>	None	None
Decapoda	Carpiliidae	<i>Carpilius maculatus</i>	'alakuma	7-11 crab
Decapoda	Pandalidae	<i>Plesionika pacifica</i>	None	None
Decapoda	Crangonidae	<i>Pontophilus modumanuensis</i>	None	None
Decapoda	Diogenidae	<i>Aniculus hopperae</i>	Unauna	Hopper's hermit crab
Decapoda	Diogenidae	<i>Ciliopagurus hawaiiensis</i>	None	None
Decapoda	Cancridae	<i>Cancer macrophthalmus</i>	None	None

Group	Family	Scientific Name	Hawaiian Name	Common Name
Decapoda	Dromiidae	<i>Dromia dormia</i>	makua-o-ka-lipoa	Sleepy sponge crab
Decapoda	Eryonidae	<i>Homeryon asper</i>	None	None
Decapoda	Eryonidae	<i>Pseudomunida fragilis</i>	None	None
Decapoda	Eryonidae	<i>Pentacheles snyderi</i>	None	None
Decapoda	Galatheidae	<i>Munida hawaiiensis</i>	None	None
Decapoda	Pinnotheridae	<i>Aphanodactylus edmondsoni</i>	None	None
Decapoda	Geryonidae	<i>Progeryon mus</i>	None	None
Decapoda	Portunidae	<i>Thalamita spiceri</i>	None	None
Decapoda	Gnathophyllidae	<i>Gnathophyllum precipuum</i>	None	Hawaiian cave shrimp
Decapoda	Gnathophyllidae	<i>Levicaris mammillata</i>	None	Red pencil urchin shrimp
Decapoda	Goneplacidae	<i>Carcinoplax cooki</i>	None	None
Decapoda	Grapsidae	<i>Cyclograpus henshawi</i>	None	None
Decapoda	Grapsidae	<i>Labuanium rotundatum</i>	None	None Harlequin shrimp
Decapoda	Hymenoceridae	<i>Hymenocera picta</i>	None	None
Decapoda	Leucosiidae	<i>Ebalia jordani</i>	None	None
Decapoda	Leucosiidae	<i>Heteronucia spinifera</i>	None	None
Decapoda	Leucosiidae	<i>Oreotlos angulatus</i>	None	None
Decapoda	Leucosiidae	<i>Randallia gilberti</i>	None	None
Decapoda	Cryptochiridae	<i>Troglocarcinus minutus</i>	None	None
Decapoda	Majidae	<i>Cyrtomaia lamellata</i>	None	None
Decapoda	Majidae	<i>Oxypleurodon carbunculus</i>	None	None
Decapoda	Oplophoridae	<i>Oplophorus foliaceus</i>	None	None
Decapoda	Stylopactylidae	<i>Stylopactylus kauaiensis</i>	None	None
Decapoda	Paguridae	<i>Catapaguroides hooveri</i>	None	None
Decapoda	Paguridae	<i>Catapaguroides setosus</i>	None	None
Decapoda	Paguridae	<i>Catapagurus granulatus</i>	None	None
Decapoda	Paguridae	<i>Micropagurus devaneyi</i>	None	None
Decapoda	Paguridae	<i>Nanopagurus reesei</i>	None	None
Decapoda	Paguridae	<i>Pagurus cataphactus</i>	None	None
Decapoda	Paguridae	<i>Pygmaeopagurus hadrochirus</i>	None	None
Decapoda	Pandalidae	<i>Heterocarpus signatus</i>	None	None
Decapoda	Parapaguridae	<i>Sympagurus pacificus</i>	None	None
Decapoda	Parthenopidae	<i>Garthambrus complanata</i>	None	None
Decapoda	Parthenopidae	<i>Garthambrus lacunosa</i>	None	None
Decapoda	Parthenopidae	<i>Parthenope nummifera</i>	None	None
Decapoda	Pasiphaeidae	<i>Pasiphaea truncata</i>	None	None Bicolor sand shrimp
Decapoda	Penaeidae	<i>Metapenaeopsis sp.</i>	None	None
Decapoda	Pilumnidae	<i>Pilumnus acutifrons</i>	None	None
Decapoda	Pilumnidae	<i>Pilumnus nuttingi</i>	None	None
Decapoda	Pilumnidae	<i>Pilumnus taeniola</i>	None	None
Decapoda	Porcellanidae	<i>Pachycheles attaragos</i>	None	None
Decapoda	Processidae	<i>Processa hawaiensis</i>	None	None Hawaiian hinge-beak shrimp
Decapoda	Rhynchocinetidae	<i>Cinetorhynchus hawaiiensis</i>	None	None

Group	Family	Scientific Name	Hawaiian Name	Common Name
Decapoda	Rhynchocinetidae	<i>Cinetorhynchus hendersoni</i>	None	Henderson's hinge-beak shrimp
Decapoda	Rhynchocinetidae	<i>Rhynchocinetes rathbunae</i>	None	Rathbun's hinge beaked shrimp
Decapoda	Sicyoniidae	<i>Sicyonia longicauda</i>	None	None
Decapoda	Spongicolidae	<i>Spongicola henshawi</i>	None	None
Decapoda	Spongicolidae	<i>Spongicoloides hawaiiensis</i>	None	None
Decapoda	Stenopodidae	<i>Stenopus earlei</i>	None	Earle's coral shrimp
Decapoda	Xanthidae	<i>Juxtaxanthias intonsus</i>	alaeke, kumimi	Bearded crab
Decapoda	Xanthidae	<i>Liomera medipacificus</i>	None	None
Decapoda	Xanthidae	<i>Liomera supernodosa</i>	None	Knotted liomera
Decapoda	Xanthidae	<i>Liomera virgata</i>	None	None
Decapoda	Xanthidae	<i>Lybia edmondsoni</i>	kū mimi pua	Hawaiian pom-pom crab
Decapoda	Xanthidae	<i>Macromedaeus lacunosus</i>	None	None
Decapoda	Xanthidae	<i>Nanocassiope sexlobata</i>	None	None
Decapoda	Xanthidae	<i>Neoliomera praetexta</i>	None	None
Decapoda	Xanthidae	<i>Neoxanthrops angustus</i>	None	None
Decapoda	Xanthidae	<i>Paractaea garretti</i>	None	None
Decapoda	Xanthidae	<i>Pilodius kauaiensis</i>	None	None
Decapoda	Xanthidae	<i>Platypodia hawaiiensis</i>	None	None
Decapoda	Xanthidae	<i>Xanthias flavescens</i>	None	None
Decapoda	Xanthidae	<i>Xanthias glabrous</i>	None	None
Isopoda	Idoteidae	<i>Colidotea edmondsoni</i>	None	None
Isopoda	Aegidae	<i>Aega quadratasinus</i>	None	None
Isopoda	Anthuridae	<i>Amakusanthura inornata</i>	None	None
Isopoda	Anthuridae	<i>Mesanthuria hieroglyphica</i>	None	None
Isopoda	Bopyridae	<i>Gigantione hawaiiensis</i>	None	None
Isopoda	Bopyridae	<i>Ionella murchisoni</i>	None	None
Isopoda	Bopyridae	<i>Scyracepon hawaiiensis</i>	None	None
Isopoda	Cryptoniscidae	<i>Faba glabra</i>	None	None
Isopoda	Cryptoniscidae	<i>Gorgoniscus incisodactylus</i>	None	None
Isopoda	Cymothoidae	<i>Creniola breviceps</i>	None	None
Isopoda	Cymothoidae	<i>Ichthyoxenus puhi</i>	None	None
Isopoda	Dajidae	<i>Zonophryxus retrodens</i>	None	None
Isopoda	Idoteidae	<i>Colidotea edmondsoni</i>	None	None
Isopoda	Jaeropsidae	<i>Jaeropsis hawaiiensis</i>	None	None
Isopoda	Janiridae	<i>Hawaianira peleae</i>	None	None
Isopoda	Ligiidae	<i>Ligia hawaiiensis</i>	None	None
Isopoda	Ligiidae	<i>Ligia kauaiensis</i>	None	None
Isopoda	Munnidae	<i>Munna acarina</i>	None	None
Isopoda	Paranthuridae	<i>Paranthura bellicauda</i>	None	None
Isopoda	Paranthuridae	<i>Paranthura ostergaardi</i>	None	None
Isopoda	Philosciidae	<i>Littorophiloscia hawaiiensis</i>	None	None
Isopoda	Sphaeromatidae	<i>Cymodocella hawaiiensis</i>	None	None
Isopoda	Stenetriidae	<i>Stenetrium medipacificum</i>	None	None
Mysidacea	Mysidae	<i>Anisomysis extranea</i>	None	None
Mysidacea	Mysidae	<i>Anisomysis hawaiiensis</i>	None	None

Group	Family	Scientific Name	Hawaiian Name	Common Name
Stomatopoda	Coronidae	<i>Paravisquilla sinuosa</i>	None	None
Stomatopoda	Harpiosquillidae	<i>Alima maxima</i>	None	None
Stomatopoda	Pseudosquillidae	<i>Pseudosquillisma guttata</i>	None	None
Tanaidacea	Tanaidae	<i>Apseudes tropicalis</i>	None	None
Tanaidacea	Tanaidae	<i>Apseudomorpha oahuensis</i>	None	None
Tanaidacea	Tanaidae	<i>Hodometrica prolixa</i>	None	None
Tanaidacea	Tanaidae	<i>Parapseudes neglectus</i>	None	None
Tanaidacea	Tanaidae	<i>Synapseudes minutus</i>	None	None

